

REMARKS

This Amendment is being filed simultaneously with a Request for Continued Examination (RCE) that requests entry of the amendments filed March 4, 2009. This Amendment should be entered after entry of the March 4 amendments.

Claims 1, 4-7, 9-11, 13-20, 22-24, 28-36 and 39-50 are pending in the application. By this Amendment, new claims 39-50 are added.

Applicants maintain all the arguments from the March 4, 2009 response. That is, each of claims 1, 4-7, 9-11, 13-20, 22-24, and 28-36 defines patentable subject matter over U.S. Patent 5,835,641 to Sotoda et al. (hereafter Sotoda) and U.S. Patent Publication 2002/0122121 to Fujii et al. (hereafter Fujii).

Independent claim 1 recites searching a center search line of a photographic screen, wherein the center search line comprises a horizontal axis at an approximate center of the photographic screen, searching an upper search line from the center search line and searching a lower search line from the center search line. Independent claim 1 also recites extracting a color average value and a deviation of a photographic object within the photographic screen for each of the upper search line and the lower search line, determining a size of photographic object based on the extracted color average value and the extracted deviation for each of the upper search line and the lower search line, and setting a zoom ratio by comparing the determined size of the photographic object with a reference value or with a preset size.

The applied references do not teach or suggest at least these features of independent claim 1, which may include features from previous dependent claims 8 and 9. More specifically,

the Office Action (dated December 22, 2008) cites Sotoda's FIGs. 11 and 16 and col. 12, line 49-col. 15, line 6 as teaching extracting a color average value and a deviation of a photographic object within the photographic screen. However, Sotoda does not teach or suggest determining a size of photographic object based on the extracted color average value and the extracted deviation for each of the upper line and the lower line.

The Office Action also cites various sections as teaching setting a zoom ratio. However, Sotoda does not teach or suggest setting a zoom ratio by comparing the determined size of the photographic object with a reference value or with a preset size.

Additionally, the Office Action states (on pages 6 and 8) that Fujii's FIGs. 17-27 and 29-30 discloses searching a center search line of a photographic screen wherein the center search line comprises a horizontal axis including an approximate center of the photographic screen. Fujii merely discloses a cursor CR that corresponds to a focused point on an LCD 10. See paragraph [0052]. A cursor display position control unit 211g may alter the display position of the AF cursor CR on the LCD 10. See paragraphs [0100]-[0101]. This does not teach or suggest searching a center search line of a photographic screen, wherein the center search line comprises a horizontal axis at an approximate center of the photographic screen. The cursor CR does not teach or suggest a horizontal axis at an approximate center of the photographic screen.

For at least these reasons as set forth above, Sotoda and Fujii do not teach or suggest all the features of independent claim 1. Thus, independent claim 1 defines patentable subject matter.

Independent claim 14 recites searching a plurality of lines of a photographic screen by alternatively searching lines with a pre-determined gap up or down one line by one line, and for each of the plurality of lines, extracting a color average value and a deviation of a photographic object on the photographic screen. Independent claim 14 also recites determining a size of a photographic object based on the extracted color average value and the extracted deviation for each of the plurality of lines, determining a zoom ratio by comparing the determined size of the photographic object and a reference value, and applying the determined zoom ratio to the photographic object.

For at least similar reasons as set forth above, Sotoda and Fujii do not teach or suggest at least these features of independent claim 14, which may include features from previous dependent claim 21. More specifically, Sotoda and Fujii do not teach or suggest determining a zoom ratio by comparing the determined size of the photographic object and a reference value. The Office Action (on page 4) also states that Sotoda's FIGs. 12a-12b teach alternatively searching lines with a predetermined gap up and down one line by one line. This does not teach or suggest searching a plurality of lines of a photographic screen by alternatively searching lines with a pre-determined gap up or down one line by one line. This also does not suggest any type of predetermined gap up or down one line by one line. Thus, independent claim 14 defines patentable subject matter.

Independent claim 24 recites searching a center search line of a photographic screen to detect a photographic object, wherein the center search line is approximately at a center of the photographic screen. Independent claim 24 also recites searching an upper search line of the

center search line to extract an average value and a deviation of a skin color of the photographic object, searching a lower search line of the center search line to extract an average value and a deviation of a skin color of the photographic object, and determining a size of a face region based on the extracted average value and the extracted deviation of the skin color for the upper search line and based on the extracted average value and the extracted deviation of the skin color for the lower search line. Still further, independent claim 24 recites comparing the determined size of the face region with a reference value, calculating a zoom ratio based on the comparing, and applying the calculated zoom ratio to the photographic screen.

For at least similar reasons as set forth above, Sotoda and Fujii do not teach or suggest at least these features of independent claim 24, which may include features from previous dependent claims 25-27. More specifically, Sotoda and Fujii do not teach or suggest comparing the determined size of the face region with a reference value, calculating a zoom ratio based on the comparing, and applying the calculated zoom ratio to the photographic screen. Sotoda and Fujii also do not teach or suggest searching a center search line of a photographic screen to detect a photographic object, wherein the center search line is approximately at a center of the photographic screen. Thus, independent claim 24 defines patentable subject matter.

Independent claim 35 recites searching a center search line of a photographic screen to detect text, determining an average value of a stroke thickness of the text by searching upper and lower search lines of the photographic screen, and determining a size of the text based on the determined average value of the stroke thickness of the text. Independent claim 35 also recites

comparing the determined size of the text with a reference value, calculating a zoom ratio based on the comparing, and applying the calculated zoom ratio to the photographic screen.

For at least similar reasons as set forth above, Sotoda and Fujii do not teach or suggest at least these features of independent claim 35, which may include features from dependent claims 37-38. More specifically, Sotoda does not teach or suggest comparing the determined size of the text with a reference value, calculating a zoom ratio based on the comparing and applying the calculated zoom ratio to the photographic screen. Sotoda also does not relate to detecting text, an average value of a stroke thickness of text, and/or a size of text. Thus, independent claim 35 defines patentable subject matter.

Independent claim 39 recites determining which one of at least two modes has been selectively set in the digital camera, wherein the at least two modes includes a first mode and a second mode, the first mode to zoom-process at least one photographic object in a different manner from the second mode. Independent claim 39 also recites recognizing the at least one photographic object included in a photographic image based on the set mode, and zooming the photographic image based on a size of the recognized object.

The applied references do not teach or suggest all the features of independent claim 39. More specifically, Sotoda discloses only one mode for recognizing an object. See Sotoda's col. 12, line 49-col. 13, line 8; and FIGs. 9-10. Fujii merely relates to a mechanism for maintaining a relationship between an object and a cursor independent of zooming. Thus, Sotoda and Fujii do not teach or suggest determining which one of at least two modes has been selectively set in the digital camera, wherein the at least two modes includes a first mode and a second mode, the first

mode to zoom-process at least one photographic object in a different manner from the second mode. Independent claim 39 therefore defines patentable subject matter.

Independent claim 47 recites a wireless communication module to receive and transmit a radio frequency, the digital camera having a zoom function, wherein the zoom function has at least two modes including a first mode and a second mode, the first mode to zoom-process at least one photographic object in a different manner from the second mode, a controller to control the wireless communication module and the digital camera, and a display screen to display information received via the wireless communication module and a photographic image captured by the digital camera under control of the controller. Independent claim 47 also recites that the controller comprises at least one algorithm to: determine which one of the at least two modes has been selectively set in the digital camera, recognize the at least one photographic object included in a photographic image based on said set mode, zoom the photographic image based on a size of the recognized object, and display the zoomed photographic image on the display screen.

The applied references do not teach or suggest at least these features of independent claim 47. More specifically, Sotoda and Fujii do not teach or suggest to determine which one of the at least two modes has been selectively set in the digital camera, recognize the at least one photographic object included in a photographic image based on said set mode, zoom the photographic image based on a size of the recognized object, and display the zoomed photographic image on the display screen.

For at least the reasons set forth above, each of independent claims 1, 14, 24, 35, 39 and 47 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 4-7, 9-11, 13-20, 22-24, 28-36 and 39-50 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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